



U.S. Ser. No. 10/023,047  
Our File: MIT.8288CON

#8/B  
JA  
4/11/03

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Kim et al.

GROUP: 1765

SERIAL NO: 10/023,047

EXAMINER: R.M. Kunemund

FILED: December 13, 2001

FOR: METHOD OF PRODUCING DEVICE QUALITY (Al)InGaP ALLOYS ON  
LATTICE-MISMATCHED SUBSTRATES

Box Non-Fee Amendment  
Assistant Commissioner of Patents  
Washington, D.C. 20231

Sir:

AMENDMENT

In response to the Office Action mailed September 30, 2002, please amend the above-identified application as follows:

IN THE CLAIMS:

Please amend the claims as follows:

- 1 1 (Amended). A method of forming a semiconductor structure comprising:
- 2 providing a single crystal semiconductor substrate of GaP; and
- 3 fabricating a graded composition buffer including a plurality of epitaxial
- 4 semiconductor  $\text{In}_x(\text{Al}_y\text{Ga}_{1-y})_{1-x}\text{P}$  alloy layers, said buffer comprising a first alloy layer
- 5 immediately contacting the substrate having a lattice constant that is nearly identical to
- 6 that of the substrate and a growth temperature greater than 650°C, subsequent alloy

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